

1     What is claimed is:

2     1.    A quick release coupling assembly structured to allow quick  
3     connection and quick release, said coupling assembly comprising:

4           a first component and a second component cooperatively  
5     structured to assume an attached orientation,

6           said first component comprising at least one locking member  
7     movably mounted thereon,

8           said at least one locking member normally disposed in an  
9     outwardly extending locking orientation,

10          an electromotive release mechanism structured such that  
11     said first component and said second component are detached from  
12     one another upon actuation of said electromotive release  
13     mechanism,

14          said electromotive release mechanism disposed in an  
15     operative association with said one locking member, and

16          said operative association being at least partially defined  
17     by said electromotive release mechanism being structured to  
18     normally dispose said locking member into said outwardly  
19     extending locking orientation.

20     2.    An assembly as recited in claim 1 wherein said at least one  
21     locking member is at least temporarily disposable into a  
22     retracted orientation.

23     3.    An assembly as recited in claim 2 wherein said operative  
24     association is further defined by said electromotive release  
25     mechanism being structured to at least temporarily dispose said

1 at least one locking member into said retracted orientation upon  
2 actuation.

3 4. An assembly as recited in claim 1 wherein said first  
4 component comprises a plurality of locking members movably  
5 mounted thereon, said electromotive release mechanism being  
6 structured to normally dispose each of said plurality of locking  
7 members into said outwardly extending locking orientation.

8 5. An assembly as recited in claim 4 wherein each of said  
9 plurality of locking members is at least temporarily disposable  
10 into a retracted orientation.

11 6. An assembly as recited in claim 5 wherein said  
12 electromotive release mechanism is further structured to at  
13 least temporarily dispose each of said plurality of locking  
14 members into said retracted orientation upon actuation.

15 7. An assembly as recited in claim 1 wherein said  
16 electromotive release mechanism comprises an actuation member,  
17 said actuation member disposed in operative association with  
18 said at least one locking member.

19 8. An assembly as recited in claim 7 wherein said actuation  
20 member comprises a distal portion structured to facilitate  
21 disposition of said locking member between said outwardly  
22 extending locking orientation and said retracted orientation.

23 9. An assembly as recited in claim 8 wherein said distal  
24 portion comprises a magnetically charged material.

25 10. An assembly as recited in claim 8 wherein said distal

1 portion comprises a propulsion member.

2 11. An assembly as recited in claim 1 wherein said  
3 electromotive release mechanism comprises a shape memory alloy  
4 component.

5 12. An assembly as recited in claim 1 wherein said  
6 electromotive release mechanism comprises a solenoid.

7 13. An assembly as recited in claim 12 wherein said  
8 electromotive release mechanism comprises a rotary solenoid.

9 14. An assembly as recited in claim 1 wherein said  
10 electromotive release mechanism comprises a transformer.

11 15. An assembly as recited in claim 1 wherein said  
12 electromotive release mechanism comprises an electric motor.

13 16. An assembly as recited in claim 1 further comprising a  
14 voice activated control module structured to actuate said  
15 electromotive release mechanism upon delivery of a verbal  
16 command from a user to said voice activated control module.

17 17. An assembly as recited in claim 16 wherein said operative  
18 association is further defined by said electromotive release  
19 mechanism structured to at least temporarily dispose said at  
20 least one locking member into said retracted orientation upon  
21 actuation via said voice activated control module.

22 18. An assembly as recited in claim 1 further comprising a  
23 manual release mechanism structured to permit manual actuation  
24 of said electromotive release mechanism.

25 19. A quick release coupling assembly structured to allow quick

1 connection and quick release, said coupling assembly comprising:

2 a first component and a second component cooperatively  
3 structured to assume an attached orientation when disposed in a  
4 predetermined aligned engagement with one another,

5 said first component comprising at least one locking member  
6 movably mounted thereon,

7 said at least one locking member normally disposed in an  
8 outwardly extending locking orientation,

9 a release structure interconnected to said first component  
10 and structured such that said first component and said second  
11 component are detached from one another upon disposition of said  
12 release structure into a disconnect position, and

13 an electromotive propulsion mechanism structured to at  
14 least temporarily impart a separation force between said first  
15 component and said second component.

16 20. An assembly as recited in claim 19 wherein said  
17 electromotive propulsion mechanism is further structured to at  
18 least temporarily impart an attraction force between said first  
19 and said second components when said components are disposed in  
20 said predetermined aligned engagement with one another.

21 21. An assembly as recited in claim 19 wherein said  
22 electromotive propulsion mechanism comprises at least one  
23 propulsion member disposed at a propulsion interface of said  
24 first and second components, said propulsion member structured  
25 to impart said separation force substantially normal to said

propulsion interface.

22. An assembly as recited in claim 21 wherein said propulsion member is disposable between a secured configuration and a separated configuration.

23. An assembly as recited in claim 21 where said secured configuration is at least partially defined by said propulsion member disposed in an inwardly retracted position.

24. An assembly as recited in claim 21 wherein said separated configuration is at least partially defined by said propulsion member disposed in an outwardly extended position.

25. An assembly as recited in claim 19 wherein said electromotive propulsion mechanism comprises a plurality of propulsion members disposed at a propulsion interface of said first and second components, each of said propulsion members being structured to impart said separation force substantially normal to said propulsion interface.

26. An assembly as recited in claim 25 wherein each of said propulsion members is disposable between a secured configuration and a separated configuration.

27. An assembly as recited in claim 21 further comprising a sequence control module structured to communicatively associate with said electromotive propulsion mechanism, said sequence control module further structured to control a sequence of positioning of said at least one locking member and said at least one propulsion member.

1       28. An assembly as recited in claim 19 further comprising a  
2       voice activated control module structured to dispose said  
3       release structure into said disconnect position upon delivery of  
4       a verbal command to said voice activated control module.

5       29. A retractable leash assembly structured to allow quick  
6       connection and release of a plurality of animals therefrom, said  
7       assembly comprising:

8             a plurality of leads each comprising a proximal end and an  
9       oppositely disposed distal end,

10            a plurality of coupling assemblies each comprising a first  
11       component, each said first component interconnected to a  
12       different one of said plurality of leads at said distal end  
13       thereof,

14            each of said plurality of coupling assemblies further  
15       comprising a second component interconnected to a different one  
16       of a plurality of attachment assemblies, each of said plurality  
17       of attachment assemblies structured to engage a different one of  
18       the plurality of animals,

19            a housing comprising an activation assembly, said housing  
20       structured to allow at least a portion of each of said leads to  
21       pass therethrough,

22            said activation assembly further comprising a drive  
23       mechanism,

24            said proximal end of each of said plurality of leads  
25       interconnected to at least a portion of said drive mechanism,

1           said drive mechanism structured to release said portion of  
2 each of said leads from said housing, and

3           said drive mechanism further structured to retract said  
4 portion of each of said leads into said housing.

5       30. An assembly as recited in claim 29 wherein said drive  
6 mechanism is structured to simultaneously release said portion  
7 of each of said leads from said housing in a uniform manner.

8       31. An assembly as recited in claim 29 wherein said drive  
9 mechanism is structured to simultaneously retract said portion  
10 of each of said leads into said housing in a uniform manner.

11       32. An assembly as recited in claim 29 wherein said drive  
12 mechanism is structured to independently release said portion of  
13 each of said leads from said housing.

14       33. An assembly as recited in claim 29 wherein said drive  
15 mechanism is structured to independently retract said portion of  
16 each of said leads into said housing.

17       34. An assembly as recited in claim 29 wherein said drive  
18 mechanism further comprises a drive motor.

19       35. An assembly as recited in claim 34 wherein said activation  
20 assembly further comprises a voice activated control module.

21       36. An assembly as recited in claim 35 wherein said voice  
22 activated control module is disposed in a communicative  
23 association with said drive motor.

24       37. An assembly as recited in claim 36 wherein said  
25 communicative association is at least partially defined by said

1 drive motor operating to retract said portion of at least one of  
2 said plurality of leads into said housing upon delivery of a  
3 verbal command from a user to said voice activated control  
4 module.

5 38. An assembly as recited in claim 37 wherein said  
6 communicative association is further defined by said drive motor  
7 operating to retract said portion of each of said plurality of  
8 leads into said housing upon delivery of said verbal command  
9 from a user to said voice activated control module.

10 39. An assembly as recited in claim 36 wherein said  
11 communicative association is at least partially defined by said  
12 drive motor operating to release said portion of at least one of  
13 said plurality of leads from said housing upon delivery of a  
14 verbal command from a user to said voice activated control  
15 module.

16 40. An assembly as recited in claim 39 wherein said  
17 communicative association is further defined by said drive motor  
18 operating to release said portion of each of said plurality of  
19 leads from said housing upon delivery of a verbal command from  
20 a user to said voice activated control module.

21 41. An assembly as recited in claim 29 wherein said activation  
22 assembly further comprises a rechargeable power supply.

23 42. An assembly as recited in claim 41 wherein said rechargeable  
24 power supply comprises a rechargeable direct current battery  
25 pack.



1        43. An assembly as recited in claim 41 wherein said housing  
2        further comprises a recharge port structured to permit  
3        interconnection of said rechargeable power supply to a power  
4        source, thereby permitting recharge of the rechargeable power  
5        supply.